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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,375

11/26/2003

Zhi-Min Choo

2060-3-85

9666

35884

7590

01/25/2008

LEE, HONG, DEGERMAN, KANG & SCHMADEKA

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EXAMINER

BEMBEN, RICHARD M

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

01/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/724,375

Applicant(s)

CHOO, ZHI-MIN

Examiner

Richard M. Bemben

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-10, 12, 13 and 15-22 is/are rejected.
- 7) ☒ Claim(s) 3, 11 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Examiner acknowledges amendment to the specification dated 30 October 2007, however does not fully accept the amendment, see below.
2. The disclosure is objected to because of the following informalities: para [0025], line 2 discloses that 300° is the 9 o'clock position; para [0026], lines 3-4 disclose that 270° is the 9 o'clock position, clarification and correction are still required.

Response to Arguments

3. Examiner acknowledges applicant's amendment to claims 3 and 14 and withdraws the 35 U.S.C. § 112 rejection in non-final office action dated 30 July 2007.
4. Applicant's arguments filed 30 October 2007 have been fully considered but they are not persuasive.

Regarding **claims 1 and 20**, applicant traverses the 35 U.S.C. § 102(e) rejection of claims 1 and 20 as being anticipated by U.S. Patent No. 6,992,699 issued to Vance et al., hereinafter "Vance". Applicant contends that Vance does not disclose "a photographic apparatus rotatively connected to the terminal". Examiner disagrees. Applicant seems to imply that the "photographic apparatus" as claimed comprises an image sensor, however the examiner sees no such requirement. Examiner interprets the mirror assembly disclosed by Vance (which was acknowledged by applicant as a rotating assembly) as a photographic apparatus because the mirror assembly is used in the process of capturing light to form an image, i.e. lenses, mirrors, filters, optics, etc.

are at least photographic apparatuses if used in the process of forming an image.

Applicant is required to further clarify what constitutes a photographic apparatus in order to overcome Vance.

Regarding **claim 12**, applicant traverses the 35 U.S.C. § 103 rejection of claim 12 over Vance in view of Official Notice (ON) on two grounds: (1) that no reversal of parts is found in regard to the magnetic flux sensor recited in claim 12 and therefore the inversion of an image when magnetic flux is not detected is not an obvious variant of inversion of an image when magnetic flux is detected and (2) that Vance does not disclose "a photographic apparatus rotatively connected to the terminal".

Regarding applicant's first argument, examiner understands column 4, lines 34-56 in the Vance patent to disclose use of non-contact position sensors, such as magnetic sensors, wherein detection and image inversion occurs when a photographing apparatus is rotated placing the detector (magnetic detector) and detectee (magnet) proximate each other. Therefore, the shaft that is rotated to rotate the photographing apparatus, as seen in Figure 4, must have a part with the magnet and a part without the magnet. When the part with the magnet is proximate the detector, image inversion occurs. Applicant's invention, as claimed in claim 12 and supported by applicant's specification at paragraph [0027], requires use of a magnetic sensor wherein detection and image inversion occurs when a photographing apparatus is rotated placing the magnetic detector and the magnet away from each other, i.e. not proximate. Similarly, the shaft that is rotated to rotate the photographing apparatus must have a part with the

magnet and a part without the magnet. Applicant's reversal of parts is switching the part of the shaft with the magnet and the part of the shaft without the magnet.

Regarding applicant's second argument, see the discussion of claims 1 and 20 above.

Regarding **claims 5-9**, see the discussion of claims 1 and 20 above.

Regarding **claim 10**, see the discussion of claims 1 and 20 above and applicant did not adequately traverse the official notice. To adequately traverse such a finding [of official notice], an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. Applicant did not point out the supposed errors regarding the official notice. Therefore, is taken to be admitted prior art. See MPEP 2144.03.

Regarding **claims 16-19**, see the discussion of claim 12 above.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. **Claims 1, 4, 20 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Vance et al. (US 6,992,699), here after "Vance".**

Regarding **claim 1**, Vance discloses a mobile communication terminal (c. 2, ll. 31-42) comprising:

a photographic apparatus rotatively connected to the terminal (c. 2, l. 63 – c. 3, l. 5; Fig. 1, “32”, image sensor; c. 3, l. 26 – c. 4, l. 23; Figs. 4&5, optics);

a magnet connected to the photographic apparatus, wherein the magnet generates a magnetic flux; and a magnetic flux sensor connected to the terminal, wherein an image produced by the photographic apparatus is inverted when the magnetic flux sensor detects the magnetic flux (c. 4, ll. 24-56, Hall-effect sensors, magnetic sensors; according to Vance, detection triggers inversion);

wherein rotation of the photographic apparatus in a predetermined angle approximates the magnet to the magnetic flux detecting sensor (c. 4, ll. 24-56, Hall-effect sensors, magnetic sensors; according to Vance, detection triggers inversion).

Also see the discussion above.

Regarding **claim 4**, refer to the rejection of claim 1 and Vance further discloses that the inverted image is reproduced on a display in the terminal (c. 4, ll. 33-37).

Claim 20 is a method claim corresponding to apparatus claim 1. Therefore, claim 20 is analyzed and rejected as previously discussed with respect to claim 1.

Regarding **claim 21**, refer to the rejection of claim 1 and Vance further discloses a display which reproduces the image captured by the photographic apparatus (c. 3, l. 10; Figure 2, display 26),

Wherein when a lens (c. 3, l. 34; Figure 4, objective lens 54) of the photographic apparatus is positioned within the predetermined angle, facing a user of the terminal, the image captured by the photographic apparatus is inverted to be correctly reproduced on the display (c. 4, ll. 33-37).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 12, 13, 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vance in view of Official Notice, hereafter "ON".**

Regarding **claim 12 and 13**, Vance discloses a mobile communication terminal (c. 2, ll. 31-42) comprising:

a photographic apparatus rotatively connected to the terminal (c. 2, l. 63 – c. 3, l. 5; Fig. 1, "32", image sensor; c. 3, l. 26 – c. 4, l. 23; Figs. 4&5, optics);

a magnet connected to the photographic apparatus, wherein the magnet generates a magnetic flux; and a magnetic flux sensor connected to the terminal, wherein an image produced by the photographic apparatus is inverted when the magnetic flux sensor detects the magnetic flux (c. 4, ll. 24-56, Hall-effect sensors, magnetic sensors; according to Vance, detection triggers inversion).

However, Vance does not disclose that the image is inverted when magnetic flux is not detected.

ON is taken that it is a well-known design choice to reverse the parts; in this case to allow image inversion when magnetic flux is not detected. See MPEP 2144.04 [R-1] (VI)(A). Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to allow image inversion when magnetic flux is not detected, which is a simple design choice, in the mobile communication terminal disclosed by Vance because as long as the product designers can determine the amount rotation/orientation of the photographic apparatus based on the presence or absence of the detection of magnetic flux, a decision for or against image inversion can be made.

Also see the discussion above.

Regarding **claim 15**, refer to the rejection of claim 12 and Vance further discloses that the inverted image is reproduced on a display in the terminal (c. 4, ll. 33-37).

Regarding **claim 22**, refer to the rejection of claim 21 and following the same logic use in the rejection of claim 12 it would have been obvious to not invert the image on the display.

9. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vance in view of Kim (US 6,882,726).

Regarding **claim 5**, Vance discloses a mobile communication terminal that can invert an image based on detection of a magnetic flux (refer to the rejection of claim 1). Vance further discloses a display (c. 2, ll. 54-56; c. 3, ll. 6-25; Figs. 1&2, "26"); a lower body (c. 3, ll. 6-25; Fig. 2, "40") comprising a circuit board (c. 3, ll. 20-25; Fig. 4, "38") wherein the circuit board receives a signal emitted by the magnetic flux sensor to invert the image produced by the photographic apparatus (c. 4, ll. 38-56). However, Vance does not disclose an upper body having a lower surface; a hinge connection element

rotatingly connecting the lower body to the upper body; and that the display is installed on the inner surface of the upper body.

Kim discloses a mobile communication terminal (c. 3, l. 45 – c. 4, l. 37; Figs. 1&2) comprising a lower body (Fig. 2, "10"); an upper body having a lower surface (Fig. 2, "20"); a hinge connection element rotatingly connecting the lower body to the upper body (Fig. 2, "30"; c. 4, ll. 42-57; Fig. 3); and a display which reproduces the image captured by the photographic apparatus, the display being installed on the inner surface of the upper body (Fig. 2, "220"). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that the mobile communication terminal take the form of a folder-type terminal as disclosed by Kim in the mobile communication terminal disclosed by Vance in order for the user/consumer to carry a more compact terminal where the majority of operational keys are protected when the terminal is folded (as is notoriously well known in the art).

Regarding **claim 6**, refer to the rejection of claim 5 and Kim further discloses that the photographic apparatus is rotatively connected to the terminal at the hinge connection element (Figs. 2&3, "30", "310").

Regarding **claim 7**, refer to the rejection of claim 6 and Vance further discloses that the magnetic flux sensor is connected to the circuit board (c. 3, ll. 20-25; c. 4, ll. 38-56).

Regarding **claim 8**, refer to the rejection of claim 6 and it is inherent that the magnet is connected to an inner surface of the photographic apparatus so that the magnet can rotate with the photographic apparatus and in order to prevent disrupting the rotation, i.e. if the magnet were placed on the outside surface it would disrupt rotation.

Regarding **claim 9**, refer to the rejection of claim 8 and it is inherent that the magnet's outer surface approximates the inner surface that it is connected to in order for the magnet to sit/connect flush to the photographic apparatus' surface.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vance in view of Kim in further view of applicant's admitted prior art (AAPA)

Regarding **claim 10**, refer to the rejection of claim 9 and AAPA discloses that it notoriously well-known to connect two materials (the magnet and the photographic apparatus) with an adhesive. Therefore, it would have been obvious to connect the magnet and the photographic apparatus with an adhesive as is well known in the art in the mobile communication terminal disclosed by Vance in view of Kim in order to secure the magnet to the photographic apparatus.

11. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vance in view of ON in further view of Kim.

Regarding **claim 16**, Vance in view of ON discloses a mobile communication terminal that can invert an image based on detection of a magnetic flux (refer to the rejection of claim 1). Vance further discloses a display (c. 2, ll. 54-56; c. 3, ll. 6-25; Figs. 1&2, "26"); a lower body (c. 3, ll. 6-25; Fig. 2, "40") comprising a circuit board (c. 3, ll. 20-25; Fig. 4, "38") wherein the circuit board receives a signal emitted by the magnetic flux sensor to invert the image produced by the photographic apparatus (c. 4, ll. 38-56). However, Vance in view of ON does not disclose an upper body having a lower surface; a hinge connection element rotatably connecting the lower body to the upper body; and that the display is installed on the inner surface of the upper body.

Kim discloses a mobile communication terminal (c. 3, l. 45 – c. 4, l. 37; Figs. 1&2) comprising a lower body (Fig. 2, "10"); an upper body having a lower surface (Fig. 2, "20"); a hinge connection element rotatably connecting the lower body to the upper body (Fig. 2, "30"; c. 4, ll. 42-57; Fig. 3); and a display which reproduces the image captured by the photographic apparatus, the display being installed on the inner surface of the upper body (Fig. 2, "220"). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that the mobile communication terminal take the form of a folder-type terminal as disclosed by Kim in the mobile communication terminal disclosed by Vance in view of ON in order for the user/consumer to carry a more compact terminal where the majority of operational keys are protected when the terminal is folded (as is notoriously well known in the art).

Regarding **claim 17**, refer to the rejection of claim 16 and Kim further discloses that the photographic apparatus is rotatively connected to the terminal at the hinge connection element (Figs. 2&3, "30", "310").

Regarding **claim 18**, refer to the rejection of claim 17 and Vance further discloses that the magnetic flux sensor is connected to the circuit board (c. 3, ll. 20-25; c. 4, ll. 38-56).

Regarding **claim 19**, refer to the rejection of claim 17 and it is inherent that the magnet is connected to an inner surface of the photographic apparatus so that the magnet can rotate with the photographic apparatus and in order to prevent disrupting the rotation, i.e. if the magnet were placed on the outside surface it would disrupt rotation.

Double Patenting

12. Claims 1 and 4 are directed to the same invention as that of claims 4 and 5 of commonly assigned US Patent No. 7,215,355. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

13. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

14. Claims 1 and 4 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 4 and 5 of prior U.S. Patent No. 7,215,355. This is a double patenting rejection.

Allowable Subject Matter

15. Claims 3, 11 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following disclose a rotatable photographic apparatus:

U.S. Patent No. 5,903,706 issued to Wakabayashi et al.

U.S. Patent No. 6,865,406 issued to Park

U.S. Pub. No. 2002/0187818 to Kang

U.S. Pub. No. 2002/0065102 to Miyake et al.

U.S. Patent No. 6,658,272 issued to Lenchik et al. discloses the use of magnetic sensors to detect the orientation of a camera and display.

U.S. Patent No. 4,086,519 issued to Persson disclose using magnetic sensors to detect an angular position.

Application/Control Number:
10/724,375
Art Unit: 2622

Page 13


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard M. Bemben whose telephone number is (571) 272-7634. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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LIN YE
SUPERVISORY PATENT EXAMINER